



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,142	08/15/2001	Richard Edwin Harper	YOR920010068US1	8914

21254 7590 04/15/2004

MCGINN & GIBB, PLLC  
8321 OLD COURTHOUSE ROAD  
SUITE 200  
VIENNA, VA 22182-3817

EXAMINER
----------

MCCARTHY, CHRISTOPHER S

ART UNIT	PAPER NUMBER
----------	--------------

2113

DATE MAILED: 04/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No. **09/929,142**

Applicant(s) **HARPER ET AL.**

Examiner **Christopher S. McCarthy**

Art Unit **2113**

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claims 1 and 29 are objected to because of the following informalities: As per claim 1, the limitation reads "...outage is a computer system." This should read "...outage in a computer system." As per claim 29, the limitation reads "...for detecting and outage;". This should read "...for detecting an outage;". Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Chefalas et al.  
U.S. Patent Application Publication US2002/0138786 .

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As per claim 1, Chefalas teaches a method of reducing warranty costs, comprising: discriminating between a hardware-induced problem or outage and a software-induced problem or outage is a computer system (0035,0036).

As per claim 2, Chefalas teaches the method of claim 1, further comprising: periodically storing indicators of system software and hardware health prior to the problem or outage (0036).

As per claim 3, Chefalas teaches the method of claim 2, further comprising: after the problem or outage, analyzing those indicators to determine whether the problem or outage was due to hardware or software (0036).

As per claim 4, Chefalas teaches the method of claim 3, further comprising: presenting information regarding a cause of the problem or outage to a user of the computer system to prevent an unnecessary service call and hardware replacement (0036, 0031).

As per claim 5, Chefalas teaches the method of claim 1, further comprising: depending upon said determining of said hardware-induced problem or outage or said software-induced problem or outage, determining a manufacturer of said hardware or said software having undergone said problem or said outage (0036,0024,0004).

As per claim 6, Chefalas teaches the method of claim 1, wherein, in event of an outage of one of said hardware and software, pre-outage data is stored in a log file across the outage (0036), wherein, an event is interpreted to encompass a possible outage of a device.

As per claim 7, Chefalas teaches a method of reducing warranty costs associated with a computer system, comprising: detecting a lack of performance of said computer system; and discriminating whether said lack of performance was caused by a hardware-induced problem or a

Art Unit: 2113

software-induced problem (0035, 0036), wherein, lack of performance is inherent in the failure of an object in the system.

As per claim 8, Chefalas teaches the method of claim 7, further comprising: gathering pre-lack of performance data, said discriminating being performed based on said pre-lack of performance data (0036).

As per claim 9, Chefalas teaches the method of claim 7, further comprising: recovering from said lack of performance (0012).

As per claim 10, Chefalas teaches the method of claim 8, wherein said lack of performance comprises an outage, and in event of an outage of one of said hardware and software, said pre-outage data is stored across the outage (0036).

As per claim 11, Chefalas teaches a method of reducing warranty costs, comprising: discriminating between a hardware-induced problem or outage and a software-induced problem or outage in a computer system; and based on said discriminating, reducing a duration of a service call and ensuring that a service technician has a correct part on hand at a time of repair (0035,0036,0004,0032).

As per claim 12, Chefalas teaches the method of claim 11, further comprising: periodically storing indicators of system software and hardware health prior to the problem or outage (0036).

As per claim 13, Chefalas teaches the method of claim 12, further comprising: after the problem or outage, analyzing the indicators to determine whether the problem or outage was due to hardware or software and which hardware or software subsystem was most likely a cause of the outage, and to produce information 0036).

Art Unit: 2113

As per claim 14, Chefalas teaches the method of claim 13, further comprising: presenting the information to a service technician of a computer system to replace or repair a faulty subsystem (0032,0004,0031).

As per claim 15, Chefalas teaches a method of reducing a trouble-shooting cost in a computer system, comprising: sampling system health data from a plurality of sources, and storing said data in a log; determining whether an outage event has occurred; and based on whether an outage event occurs, analyzing logged and other data to judge a likely cause of the event (0036).

As per claim 16, Chefalas teaches the method of claim 15, wherein if the event is judged to be due to software, determining whether automatic recovery is possible, and if so, invoking an automatic recovery mechanism and notifying a customer or field support personnel that a software problem is the cause of the event, and identifying a faulty subsystem for subsequent troubleshooting (0035,0031,0034).

As per claim 17, Chefalas teaches the method of claim 15, wherein if the event is judged to be due to software, determining whether automatic recovery is possible, and if not, then indicating that the event is due to software, and is not automatically recoverable, and notifying a customer or service technician to manually recover the fault (0035,0031,0034,0030).

As per claim 18, Chefalas teaches the method of claim 15, further comprising: determining whether the event is a software fault and if not, then determining whether a diagnosable hardware fault exists (0035,0036).

As per claim 19, Chefalas teaches the method of claim 18, further comprising: if the event is judged to be caused by hardware, then examining at least one of a hardware error log, an

Art Unit: 2113

error register, and a hardware diagnostic, and attempting to localize a replaceable component that caused the event; informing a customer or a service technician that the outage was due to hardware; and manually recovering the hardware by replacing only defective hardware (0035,0031,0004).

As per claim 20, Chefalas teaches a computer node associated with a computer system, comprising: hardware for executing an operating system, at least one application program, and a system health monitoring program, wherein said system health monitoring program gathers system software and hardware health data from an application program, an operating system, and the hardware, and discriminates a cause of an event comprising at least one of a problem or outage of said computer node (0024,0025,0012,0036,0035).

As per claim 21, Chefalas teaches the computer node of claim 20, wherein said computer node includes sources of information for assessing software and hardware health (0035,0036).

As per claim 22, Chefalas teaches the computer node of claim 21, wherein said information is measured and logged prior to a failure event, said system health monitoring program monitors at least one of resource consumption data, system and application software error logs, system utilization and performance data, and software error counts (0035,0036).

As per claim 23, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program monitors at least one of concurrent diagnostics, hardware error logs, and hardware error counts, and wherein said system health monitoring program gathers information after the event, including at least one of error logs, crash dumps of memory, error codes, offline or power-on hardware diagnostics, and hardware error registers (0035).

Art Unit: 2113

As per claim 24, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program includes a log device for permanently storing a time history of system software and hardware health data, said log device being readable after an event to determine a likely cause of the event (0036,0037).

As per claim 25, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program includes an analyzer for analyzing the software and hardware health data (0035,0036).

As per claim 26, Chefalas teaches the computer node of claim 25, wherein said analyzer is run on the computer system that has experienced a problem, or on another execution environment (0035,0036,0012).

As per claim 27, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program includes a notifier for notifying a customer or field service support personnel regarding a cause of the outage or problem, whether a service call is necessary, and where the likely cause of the outage or problem resides (0013,0031,0004,0035,0036).

As per claim 28, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program samples a plurality of parameters, said plurality of parameters including at least one of: a parameter indicating a number of bytes that must be kept in physical memory and cannot be paged out to disk; a parameter indicating a number of bytes that reside in said physical memory plus the paging files; a parameter indicating a number of errors that have been reported by transmission control protocol (TCP)/Internet Protocol (IP) software; and a parameter indicating whether said TCP errors are accompanied by Network Adapter Errors (0037,0031).



Art Unit: 2113

As per claim 29, Chefalas teaches A system for use with a computer system, comprising: an outage detector for detecting and outage; a memory for storing pre-outage data of the system; and a discriminator for discriminating whether said outage was caused by a hardware component or a software component of said system (0036).

As per claim 30, Chefalas teaches the system according to claim 29, wherein, in event of an outage of one of said hardware and software, said pre-outage data is stored across the outage (0036).

As per claim 31, Chefalas teaches a signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a method for reducing warranty costs, said method comprising: discriminating between a hardware-induced problem or outage and a software-induced problem or outage in a computer system (0036,0035), wherein, a memory is inherent in the system in that is capable of storing an event log and a monitoring program.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: See attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. McCarthy whose telephone number is (703)305-7599. The examiner can normally be reached on M-F, 8 - 4:30.

Art Unit: 2113

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703)305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

csn  
April 13, 2004



ROBERT BEAUSOLIEL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100